

CLAIMS

1. A rack oven, comprising:
a chamber for receiving a rack;
a door providing access to the chamber; and
a rack carrier for engaging a food product rack, the rack carrier comprising:
a rotatable output member extending from the top of the chamber,
a main body connected for rotation with the rotatable output member, the main body and at least one side support defining a rack receiving channel, the side support movably connected with the main body for movement between a rack holding position relative to the main body and a rack transfer position in which the side support is moved at least outward from the main body, the side support biased into one of the rack holding position and the rack transfer position, and at least one stop within the channel for engaging a top portion of a rack to limit its movement into the channel.
2. The rack oven of claim 1 wherein the side support is biased into the rack holding position.
3. The rack oven of claim 2 wherein the at least one side support comprises a first side support movably connected with a first side of the main body and a second side support movably connected with a second side of the main body, the first side support biased into a rack holding position relative to the main body and movable at least outward from the main body to a rack transfer position, the second side support biased into a rack holding position relative to the main body and movable at least outward from the main body to a rack transfer position.

4. The rack oven of claim 1 wherein an entry part of the channel is defined in part by spaced apart alignment guides located at opposite sides of the entry part.
5. The rack oven of claim 4 wherein the spaced apart alignment guides are connected with the main body.
6. The rack oven of claim 1 wherein the side support is connected to the main body by at least one biasing mechanism.
7. The rack oven of claim 1 wherein the side support is biased into the rack holding position by gravity.
8. The rack oven of claim 1 wherein the side support is movable both outward and upward from the main body.
9. The rack oven of claim 8 wherein the side support is connected to the main body by one or more leaf spring members.
10. The rack oven of claim 1 wherein the side support includes a front edge part including a rack engaging surface configured to interact with a top portion of a rack upon movement of a rack into the channel thereby causing the side support to move from its rack holding position to its rack transfer position.
11. The rack oven of claim 10 wherein the side support includes a rear edge part including a rack engaging surface configured to interact with a top portion of a rack upon removal of a

rack from the channel thereby causing the side support to move from its rack holding position to its rack transfer position.

12. The rack oven of claim 1 wherein the at least one stop comprises at least first and second spaced apart support brackets.

13. A rack oven, comprising:
a chamber;
a door providing access to the chamber; and
a rack carrier engaged with a food product rack, wherein:
the food product rack includes a top portion with laterally spaced first and second side bars;
the rack carrier includes a first side support with a lip engaging an underside of the first side bar and a second side support with a lip engaging an underside of the second side bar.

14. The rack oven of claim 13 wherein the rack carrier includes a main body and the first side support and second side support are each movably connected to respective side parts of the main body.

15. The rack oven of claim 13 wherein the first side support and second side support are biased into positions in which they respectively engage the first side bar and second side bar.

16. The rack oven of claim 13 further comprising at least one stop adjacent a crossbar that connects the laterally spaced first and second side bars, the stop limiting further movement of the rack into the rack carrier.

17. A rack carrier for engaging a food product rack, the rack carrier comprising:
 - a shaft;
 - a main body connected with the shaft, wherein the main body and at least one side support define a rack receiving channel, the side support movably connected with the main body and biased into a rack holding position relative to the main body, the side support movable at least outward from the main body to a rack transfer position, and at least one stop within the channel for engaging a crossbar of a top portion of a food product rack to limit its movement into the channel.
18. The rack carrier of claim 17 wherein an entry part of the channel is defined in part by spaced apart alignment guides located at opposite sides of the entry part.
19. The rack carrier of claim 17 wherein the side support is connected to the main body by at least one biasing mechanism.
20. The rack carrier of claim 17 wherein the side support is movable both outward and upward from the main body.
21. The rack carrier of claim 20 wherein the side support is connected to the main body by one or more leaf spring members.
22. The rack carrier of claim 17 wherein the side support includes a front edge part including a rack engaging surface configured to interact with a top portion of a rack upon movement of a rack into the channel thereby causing the side support to move from its rack holding position to its rack receiving position.

23. The rack carrier of claim 22 wherein the side support includes a rear edge part including a rack engaging surface configured to interact with a top portion of a rack upon removal of a rack from the channel thereby causing the side support to move from its rack holding position to its rack receiving position.

24. The rack carrier of claim 17 wherein the side support includes a lower lip for positioning beneath and adjacent a first side bar of a top portion of a rack.

25. The rack carrier of claim 24 wherein the lower lip includes a recessed portion for location adjacent a cross bar/first side bar connection point.

26. The rack carrier of claim 17 wherein the stop comprises a bracket including a lower lip for being positioned beneath the crossbar.

27. A rack carrier for engaging a food product rack, the rack carrier comprising:
a main body, at least one side support movably connected with the main body, whereby the main body and the side support define a rack receiving channel, the side support having a rack holding position relative to the main body and a rack transfer position relative to the main body, when moving from its rack holding position to its rack transfer position the side support moves outward and upward.

28. The rack carrier of claim 27, further comprising:
a shaft connected with and extending upward from the main body.

29. The rack carrier of claim 27, further comprising:

spaced apart support brackets within the channel for engaging an upper cross bar of a food product rack.

30. The rack carrier of claim 27 wherein the side support is biased into the rack holding position.

31. The rack carrier of claim 27 further comprising:

ay least one stop positioned within the channel for engaging a top portion of a food product rack to limit its movement into the channel.